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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/542,173
Filing Date: March 03, 2006
Appellant(s): PROVVEDI, LEONARDO

Stephen W. Palan
For Appellant

This is in response to the appeal brief filed 11/23/2009 appealing from the Office action mailed 07/06/2009.

EXAMINER'S ANSWER

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is incorrect.

The amendment after final rejection filed on 6/12/2009 has not been entered.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

7,339,998	Murata
20030036403	Shiu et al.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-10, 12, and 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable Murata et al. (US 7339998 B2), and in view of Shiu et al. (US 20030036403 A1).

Regarding claims 1 and 15. Murata et al. discloses in a mobile communications system comprising a network (col. 9 lines: 64—col. 10 lines: 6, Murata et al. teaches network components such as multiple mobiles and cells stations, hence, a network) and at least one mobile station (col. 9 lines: 64—col. 10 lines: 6, Murata et al. teaches network components such as multiple mobiles and cells stations, hence, a network), a

method for selecting a transport format combination TFC to be used for communication from the mobile station to the network (abstract), over a channel of variable quality (fig. 4, 10, B-12, col. 15 lines: 3-16, Murata et al. teaches classification of TFC in order of classes based on quality and evaluation), the method comprising the steps of:

a) defining a set of possible transport format combinations (fig. 4, 10, B-12, col. 15 lines: 3-16, Murata et al. teaches classification of TFC in order of classes based on quality and evaluation);

b) calculating a channel quality requirement for the effective use of each transport format combination (fig. 4, 10, B-12, col. 15 lines: 3-16, Murata et al. teaches classification of TFC in order of classes based on quality and evaluation);

c) indicating the transport format combinations and the channel quality requirements to the mobile station (col. 19 lines: 34-54, Murata et al. teaches base station sending TFC information to mobile device after monitoring conditions of traffic);

d) calculating an existing quality of the channel of variable quality (fig. 10-12, col. 8 lines: 28-34, col. 19 lines: 22-60, col. 20 lines: 46—col. 21 lines: 52, Murata et al. teaches method of classifying ranking based on quality); and

e) indicating the existing quality of the channel of variable quality to the mobile station (fig. 10-12, col. 8 lines: 28-34, col. 19 lines: 22-60, col. 20 lines: 46—col. 21 lines: 52, Murata et al. teaches method of classifying ranking based on quality; and,

in the mobile station (fig. 10-12, col. 8 lines: 28-34, col. 19 lines: 22-60, col. 20 lines: 46—col. 21 lines: 52, Murata et al. teaches method of classifying ranking based on quality, suspecting that the calculation are also derived from system, it is not clear as to

what is meant “in the mobile station”);

f) storing the transport format combinations and relative channel quality requirements (col. 20 lines: 39-45, Murata et al. teaches storing information parameters in a non-volatile memory in mobile station);

However, Murata et al. does not discloses specifically, g) receiving the indication of existing channel quality; nonetheless, Shiu et al. teaches sending information to the mobile device about indication of existing channel quality (¶: 49-52, Shiu et al. teaches parameters send for mobile device to adjust for transmission of data). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to specifically include receiving the indication of existing channel quality, as taught by Shiu et al. for the purpose of adjusting power levels and user-specific data in a time-division multiplexed manner along with control data (¶:49).

h) selecting one of the transport format combinations having a channel quality requirement no greater than the existing channel quality (fig. 4, 10, B-12, col. 15 lines: 3-16, Murata et al. teaches classification of TFC in order of highest to lowest quality), and

i) informing the network of the selected transport combination (col. 6 lines: 40-49, Murata et al. teaches communication system W-CDMA information relating to TFC), however, Murata et al. doesn't disclose specifically characterized in that the indication of the existing quality of the channel of variable quality is communicated to the mobile station by in-band signaling, whereby the indication of the existing quality of the channel of variable quality is included in every downlink radio packet, in data locations normally

assigned for carrying user information, nevertheless, Shiu et al. teaches information relating variable quality is communicated to the mobile station by in-band signaling, in other words, downlink radio packets through base station(s) (abstract, title, ¶:48-50, 52-55, Shiu et al. teaches downlink transmitting channel quality from base station to the mobile device station). One skilled in the art would be motivated to have information relating to quality of service to mobile station by means of the system using base station through downlink to be stored in mobile device to adjust internal settings to broadcasted parameters by base station to be able to efficiently communicate and abate SNR.

Consider claim 2. A method according to claim 1 wherein the step h of selecting one of the transport format combinations is performed with regard to the type of data to be transmitted by the mobile station (¶: 49-52, Shiu et al. teaches parameters send for mobile device to adjust for transmission of data).

Consider claim 3. A method according to claim 1, wherein the transport format combinations enable transmission of data blocks containing data from different Temporary Block Flows in each block (¶: 33, Shiu et al. teaches transport format combinations enable transmission of data blocks in this case following the standards listed that are known in the art and are incorporated).

Consider claim 4. A method according to claim 1, wherein calculation of the existing quality of the channel of variable quality is performed periodically during communication (col. 10 lines: 6-19, Murata et al. teaches monitoring communication traffic).

Consider claim 5. A method according to claim 1, wherein the relative channel quality is calculated as the minimum channel quality required such that data sent on the

channel is received with an error ratio below a defined threshold (col. 20 lines: 15-19, col. 22 lines: 39-45, Murata et al. teaches monitoring channel if it falls below class level or goes beyond designated class level it will not be allowed).

Consider claim 6. A method according to claim 1, wherein the step c of indicating transport format combinations and channel quality requirements to the mobile station includes the steps of:

(c1) ranking the transport format combinations according to the associated channel quality requirement (fig. 12, col. 21 lines: 65—col. 22 lines: 8, Murata et al. teaches simplified calculation of rank and it is an absolute value); and

(c2) indicating the rank of each transport format combination to the mobile station, along with the transport format combinations themselves, to the mobile station (col. 19 lines: 54-60, Murata et al. teaches transmitting information to mobile station traffic information and classification).

Consider claim 7. A method according to claim 6, wherein the step c2 of indicating the rank of each transport format combination comprises indicating the transport format combinations themselves in order of increasing, or decreasing, rank (fig. 4, 10, B-12, col. 15 lines: 3-16, Murata et al. teaches classification of TFC in order of classes based on quality and evaluation).

Consider claim 8. A method according to claim 6, wherein the step of indicating the existing quality of the channel of variable quality comprises indicating the rank of the transport format combination having the highest channel quality requirement, which could effectively be employed on the channel in its existing quality (fig. 10-12, col. 8

lines: 28-34, col. 19 lines: 22-60, col. 20 lines: 46—col. 21 lines: 52, Murata et al. teaches method of classifying ranking based on quality).

Consider claim 9. A method according to claim 8, wherein the rank is indicated as an absolute value (fig. 12, col. 21 lines: 65—col. 22 lines: 8, Murata et al. teaches simplified calculation of rank and it is an absolute value).

Consider claim 10. A method according to claim 8 wherein the rank is indicated as a relative value, being an offset relative to a previous value of the rank (col. 10, lines: 41-45, col. 12 lines: 39-56, abstract, Murata et al. teaches measurements are relative and ranked accordingly).

Consider claim 12. A communications system comprising a network and a mobile station, respectively comprising means for carrying out the steps of, and arranged to perform, the method of claim 1 (col. 6 lines: 40-49, Murata et al. teaches communication system W-CDMA).

Consider claim 16. The method of claim 15, wherein the indication of existing channel quality is included in the packet following the coded transport format combination identifier (TFCI) (¶: 51, Shiu et al. teaches including data with TFCI).

Consider claim 17. The method of claim 15, wherein the indication of existing channel quality of the channel of variable quality is received by the mobile station in every data packet (¶: 51-54, Shiu et al. teaches downlink shared channel and TFCI field with data to mobile device).

Consider claim 18. The method of claim 15, wherein the selection of one of the transport format combinations is performed with regard to the type of data to be

transmitted by the mobile station (¶: 49-52, Shiu et al. teaches parameters send for mobile device to adjust for transmission of data).

Consider claim 19. The method of claim 15, wherein the transport format combinations allow transmission of data blocks containing data from different Temporary Block Flows in each block (¶: 33, Shiu et al. teaches transport format combinations enable transmission of data blocks in this case following the standards listed that are known in the art and are incorporated).

Consider claim 20. The method of claim 15, wherein the relative channel quality is calculated as the minimum channel quality required such that data sent on the channel is received with an error ratio below a defined threshold (col. 20 lines: 15-19, col. 22 lines: 39-45, Murata et al. teaches monitoring channel if it falls below class level or goes beyond designated class level it will not be allowed).

Consider claim 21. The method according to claim 15, wherein the mobile station receives from the base station an indication of a rank of each transport format combination according to the associated channel quality requirement (col. 19 lines: 54-60, Murata et al. teaches transmitting information to mobile station traffic information and classification).

(10) Response to Argument

The APPELLANT arguments and remarks, wherein the claims 1-21 are directed to TFC selection from a mobile station to a network, this is based on information about the uplink channel conditions. The rejection made by the combination of both references of Murata et al. and Shiu et al. teach and suggest by combination the applicant's claims,

regarding the Appeal Brief arguments, the fact that the reference of Murata et al. discloses selecting the set of TFC's the mobile terminal has the ability to choose from the parameter related to transmitted power values, is in error by applicant since in further reading in col. 10 lines: 24-56, the reference of Murata et al. does further point out other parameters where the TFC's sets are determined by mobile terminal, which include the size of the data and power related to transmission classes as defined in the reference. It is true that the reference of Murata et al. does not disclose that the network is responsible for providing sets of TFC's to the mobile station; nevertheless, the combination of reference of Shiu et al. remedies the deficiency of Murata et al. by providing a network structure to support conditions of the channel quality to the mobile terminal for communication. As stated in Paragraphs: 11, 12, 13, and 34-37, wherein the reference of Shiu et al. teaches the ability to more efficiently control the transmit power for a data transmission that uses a number of formats (e.g., rates, transport formats), this is done by knowing the different formats for a given data channel may require different target SNIRs to achieved a particular BLER.

The arguments in page 9 of the Appeal Brief, wherein the applicant arguments for claim 1 and 15 about having a set of transport format combinations or a calculated channel quality requirement for each transport format combination of the set are totally in error since as taught in Murata et al. col. 11 lines: 13-40, and in accord with col. 10 lines: 24-40, wherein they are both, the TFC and the transmission power are related to one another and handled within the mobile terminal.

The APPELLANT arguments that the stated reference citation on final rejection about Shiu's not discussing SNIRs is in error since the paragraphs cited do discuss SNIR's of Channels, as stated in the reference this applies to upload and download channels.

The other arguments relating to inband signaling in a user data portion of a radio packet, Shiu et al. teaches in paragraph 39 that on the uplink, bits are repeated or punctured, inband signaling is exactly adding in the message data packet to be sent an extra set of bits with information the limitation reads sufficiently broad that the reference of Shiu et al. reference meets the claim limitation. In further reading of Murata et al. teaches TrCH and TAF for channel quality that the mobile terminal receives, therefore, the argument that the references do not state or teach or suggest that there is no information being sent or received by mobile terminal.

The applicant's arguments, wherein claim 21, which depends on claim 15, the cited reference do disclose the different classes and these are based on their different parameters therefore they are ranked which one of the parameters is associated with channel quality that is related to TFC and transmission power.

The APPELLANT argues about figures 4, 12, and 10B wherein they disclose number of TFC and their ranked and their slot format and how they are classified and ranked by Murata et al. Applicant argues that the elements of claim 6, C1 and C2 are not disclosed by Murata et al. and the combination would not disclose it either, nevertheless, the examiner respectfully disagrees. Murata et al. does teach ranking and classifying the TFC's in classes and length of the message, which are related to

transmission power. The TFC are necessary for communicating and power values for transmission are determined by the TFC selected for the data to be sent.

Therefore, the claims 1-21 read sufficiently broad that the references cited and one of ordinary skilled in the art would use the combination of Murata et al. and Shiu et al. to meet the limitations of claims 1-21.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Diego Herrera/

Examiner, Art Unit 2617

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